

Remarks and argument

Claims 1-5, 7, 11-13, 16-35, 37-39, 41-43, 45-54 are pending in the case. Claims 14, 36, 40 and 44 are canceled. Claims 13, 35, 39, 43 and 46 have been amended. Claims 47-54 are added.

The subject matters of canceled claims 14, 36, 40 and 44 are reorganized into the respective amended claims 13, 35, 39, and 43. Amendments to claims 13, 35, 39 and 43 have broadened the claims rather than narrowed them. Therefore, no reduction in available scope of equivalents under the Doctrine of Equivalents should attach by virtue of these amendments.

Claim 46 has been amended to depend from claim 1. This is purely formal and not substantive, as the amendment does not change the scope of the claim in any fashion. Therefore, no reduction in available scope of equivalents under the Doctrine of Equivalents should attach by virtue of this amendment.

Support for new claims 47-54 is found throughout the specification. Support for new claim 47 is found, for example, on page 13, lines 27-28; support for claims 48, 50-54 is found, for example, on page 8, lines 22-25; and support for claim 49 is found, for example on page 18, line 28 to page 19, line 2. No new matter has been added.

Reconsideration and allowance is respectfully requested in light of the foregoing amendments and the remarks that follow.

I. Rejection under 35 U.S.C. §103(a)

Claims 1-5, 7 and 11-46 are rejected unpatentable over Show Denko KK JP 62096408 in view of Pera U.S. patent No. 4,775,525. and Elliott et al. U.S. Patent No. 5,011,682.

The examiner notes that these claims are drawn to a composition comprising ascorbyl-2-phosphate or a sodium or potassium salt thereof and further comprising calcium ions wherein the composition is mixed with an orally acceptable carrier, and further comprising a calcium chelating agent, a pyrophosphate, tripolyphosphate or polyphosphate tartar control agent, water soluble fluid, humectant. Thickener, surfactant, sweetener, flavorant, colorant, abrasive, stabilizer, fluoride containing compound, anticaries agent, antimicrobial agent, essential oil and desensitizing agent.

The examiner contends that Showa Denko KK teach ascorbic acid phosphoric acid ester or it's salt (e.g. K^+ Ca^{++} or Mg^+ salt) in an oral composition to be used for alveolar pyorrhea, cleaning teeth, removing bad breath and washing the teeth. It is in compositions such as toothpaste, chewing gum and troches. Working example 1 teaches calcium diphosphate dihydrate (source of calcium/abrasive), sodium carboxymethylcellulose and carrageenan (thickeners), glycerin (water soluble liquid) sorbital (water soluble sold), fragrance (flavor), preservative (antimicrobial), sodium saccharin (sweetener), sodium lauryl sulfate (surfactant), and ascorbic acid magnesium phosphate.

The examiner admits that Showa Denko does not teach the desensitizing agents of claims 40-44, the non water-soluble solid and liquid, or the pyrophosphate, tripolyphosphate or polyphosphate tartar control agent. However, the examiner cites Pera (4,775,525) to teach strontium as a desensitizing agent for the teeth (column 5, lines 27-43), and notes that it would have been made obvious to one of ordinary skill in art at the time it was made to incorporate desensitizing agents and vegetable oils and wax.

Therefore, the examiner concludes that such a modification would have been motivated by the reasoned expectation of producing dentifrice composition which is in comprehensively cleaning teeth and desensitizing teeth of individuals that have become sensitized. Strontium is a well-known desensitizer, which is known and used in dentifrice composition and the wax would effectively coat the teeth and add shine to the teeth.

The examiner further cites Elliott et al. to teach Soluble inorganic pyrophosphate salts have over the last few years set the commercial standard as tartar control agents (column 1, lines 26-31) and teach tartar control agents such as disodium pyrophosphate, tetrapotassium pyrophosphate, tetrasodium pyrophosphate to a dentifrice composition (column 5, lines 5-16), and contends that it would have been made obvious to one of ordinary skill in art at the time it was made to incorporate the instantly recited tartar control agents. The examiner concludes that such modification would have been motivated by the reasoned expectation of producing a dentifrice composition, which is effective in comprehensively cleaning teeth and removing tartar, as Elliott et. al. state that the pyrophosphate tartar control agents have set the commercial standard and are known and used in dentifrices.

Finally, the examiner notes that Applicant claims a pH of the composition from about 5.5 to about 10.0 now in independent claim 1 and cites <http://pubs.acs.org.hotartcl/chemtch/95/dec/dec/html> December 1995 to recites "that Sodium fluoride, sodium monofluorophosphate, and stannous fluoride are the most common fluoride sources used in toothpaste. Great care must be taken in the formulation of these agents so that their anticaries activity is not reduced by other dentifrice ingredients, such as the abrasive system. For example, whereas sodium monofluorophosphate is compatible with both silica abrasive at neutral pH values." Thus, the examiner further concludes that it would have been obvious to employ a pH

of 5.5 to 10 since this range encompasses neutral pH's and this would be most compatible for formulations with fluoride.

Applicant respectfully traverses the rejection.

None of the above references teaches or suggests an oral care composition of claim 1. The Chemtech article, "Squeezing out a better toothpaste," dated December 1995, cited by the Examiner, mentions the use of neutral pHs when dealing with fluoride containing toothpastes. The article does not mention or suggest the use of an ascorbyl-2-phosphate compound, as is required in independent claims 1 and 46 of the present invention.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142.

First, one of skill in the art would not be motivated to look in an article generally describing toothpaste to suggest the present invention of an oral care composition including an ascorbyl-2-phosphate compound. Second, even if there is a motivation to look, which Applicant by no means concedes, the article merely suggests that a neutral pH may be tried. Such a suggestion to try does not satisfy the criterion of a reasonable expectation of success, as there is no suggestion that what may be useful in a general fluoride toothpaste may also be useful in the oral composition of claim 1. Therefore, the references cited do not suggest or motivate the subject matter of claim 1. The examiner is applying hind sight to use Applicant's invention as a template to piece together the prior art references and claim 1 is patentable over Show Denko KK JP 62096408 in view of Pera U.S. patent No. 4,775,525. and Elliott et al. U.S. Patent No. 5,011,682. Reconsideration is respectfully requested.

II. CONCLUSION

In view of the remarks provided above, it is believed that all pending claims are in condition for allowance. Applicants respectfully request favorable reconsideration and early allowance of all pending claims: 1-5, 7, 11-13, 16-35, 37-39, 41-43, 45-46, and new claims 47-54.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact the undersigned at 310-845-8501.

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Respectfully submitted,



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